## 'Foot-powered' adaptive management on the Kenai National Wildlife Refuge

by Jim Hall

For the last few years, a subtle change has been occurring in the amount of people who are using the "horse trails" associated with the Benchlands above Tustumena Lake on the Kenai National Wildlife Refuge.

Some of this increased use is associated with folks accessing the area for caribou and moose hunting, and some has been with people who just want to go up and see the area in all its splendor. With any change in the way people use land, there is a corresponding set of consequences that occurs, such as: bear encounters; increased erosion; additional trash; etc.

In the science of land management, the words "adaptive management" refer to the ability to adapt management strategies to change. Can adaptive management overcome these kinds of problems?

As with many issues, one cannot understand the full scope of the problem without having firsthand knowledge of the lay of the land, the perceptions of the human users, and wildlife patterns of the area. So, refuge manager Robin West and I decided to hike the two main Benchlands horse trails in late July to determine if the trails could be relocated, or what, if anything, could be done to decrease the frequency of human-bear interactions in these areas.

We began our hike on a Monday morning at 10 a.m. on the shores of Tustumena Lake at the mouth of Bear Creek. For those of you who have never hiked up these trails, I'm inclined to say, "Don't." If at all possible, ride a horse! The trails have evolved with hunters and guides over the years, and they are now slotted ruts—a series of 12-inch deep holes spaced three feet apart.

The concept of "trail" is just that in this scenario—only a concept. A horse does not like to step on a high point, so over time, the holes in the trails have gotten deeper and deeper, OK for a horse, but very tough when you're toting a backpack on foot!

Bear Creek trail follows the creek for a couple of miles, then turns and winds its way upward to the Benchlands, which is a high plateau. The morning we were on the trail, it was hot, muggy and the mosquitoes were horrendous. One problem associated with hiking a fall trail in the late summer is that you may be the first person on that trail since the preceding fall, so the vegetation has had all summer to grow, unencumbered, completely concealing the trail in places!

Such was the case with us, and by late evening we had lost the trail somewhere near treeline. With the trail now gone, we made the decision to cut crosscountry heading east, because all the alpine was to the east.

Three hours later we exited timber at "top camp," and two hours after that across a few more miles of tundra, we camped for the night atop a small hill. Night came as we watched a small bull caribou trotting across the alpine.

By 6 o'clock in the morning we were up, loading our packs, and by 6:30 our feet were headed south toward the Bear Creek drainage and the elusive top camp trail that runs to Moose Creek below a prominent landmark on the Bench lands.

After bushwhacking through two drainages, including Bear Creek, we finally struck the trail. Lunchtime found us at the Moose Creek top camp, where we had a bite to eat, and I marveled at the garbage left behind from last hunting season.

Burnt scraps of a paperback suspense novel crowded the burn pit, while plastic buckets littered the landscape. Robin and I discussed how to get all of that garbage down from Moose Creek top camp, and how wilderness values were affected by its presence there.

All of this area, including Tustumena Lake, was designated as a Wilderness Area by Congress in 1980, so that present and future generations of Alaskans and Americans in general could enjoy the wild, scenic grandeur of this beautiful area of the Kenai Peninsula.

Time was moving, and so were we, and by 3 p.m. we were back on the shores of Tustumena awaiting our pickup boat.

The trails? Despite walking every foot of the Bear Creek and Moose Creek trails in the short time allotted to us, neither Robin nor I could see any logical, costeffective method for relocating the trails away from the creeks, the salmon therein, and the bears that result from the salmon.

However, we did decide to have our trail crews clear the sections of trail along the streams late next summer, thereby increasing visibility, and thus, hopefully, reducing the bear encounters.

As we sat there on the shore of Tustumena, silently absorbing the warm sun after a long hike, a small black bear stepped out onto the beach looking for an easy salmon to snag out of Moose Creek.

It watched us for a few moments, while we watched it from a distance of only 40 feet or so, before it finally decided that it would be better to hunt for fish

within the confines of the spruce, and it slipped from view.

It was the only bear we sighted in two days, and perhaps for me at least, a reminder of the resources the refuge protects and part of what makes living in Alaska so special.

Jim Hall has been the deputy refuge manager at the Kenai National Wildlife Refuge for the last two years. For more information about the Refuge, visit the headquarters in Soldotna, call (907) 262-7021. Previous Refuge Notebook columns can be viewed on the Web at http://kenai.fws.gov.